Innovative evaluation strategies: Instilling evidence based practice attitudes that will impact future global health outcomes

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Gloria Dixon DNP, RN
Conflicts of Interest

• No COI to report:
  Tonya Breymier
  LaDonna Dulemba
  Gloria Dixon
Symposium Objectives

1) The learner will discuss the impact of evidence based practice attitudes on global health outcomes.

2) The learner will discuss innovative end-of-program learning outcome assessments that evaluate evidence based practice attitudes.
A Culture of Evidence-Based Practice (EBP)

- ICN recognized the impact of nursing EBP contributions to global healthcare.
- Barriers include:
  - Adopting an EBP mindset (individual)
  - Application to practice
  - Continue to struggle with adoption of an EBP culture
Part 1
Program Assessment of EBP Attitudes

LaDonna Hatley Dulemba, DNP, ANP, RN
Part 1 Objectives

1. The learner will appraise the value of program outcome assessment on EBP attitudes

2. The learner will analyze program outcome assessment of EBP attitudes toward global health outcomes
   - Review of evidence on EBP attitudes in nurses
   - Use of program assessment to support EBP enhancement of global health outcomes

3. The learner will examine technology initiative incorporated into program outcomes assessment
   - Evidence to support student understanding of program outcome assessment
   - Utilization of an electronic defense project initiation
Value of program outcome assessment on EBP attitudes

• Current research results
• Impact of EBP knowledge, skills, behaviors
Impact of EBP on Patient Outcomes

Program Outcome Assessment of EBP Attitudes Toward Global Health Outcomes

Use of Program Assessment to Support EBP Enhancement of Global Health Outcomes

In Nursing Curriculum

&

In Nursing Practice
Technology Initiative Incorporated into Program Outcomes Assessment
History of PLO Assessment at IU East
Evidence to Support Student Understanding of Program Outcome Assessment

What is an electronic defense?
### Final Reflection Rubric

| Learner identifies how each MSN program outcome was met or not met during the practicum experience. Shares experiences for support. | 20 |
| Learner identifies how each MSN Essential was met or not met during the practicum experience. Shares experiences for support. | 20 |
| Learner identifies how each NLN Nurse Educator Competency was met or not met during the practicum experience. Shares experiences for support. | 20 |
| Learner presents evidence-based support (literature citations) where warranted. | 20 |
| Learner presents evidence examples (assignment) to support defense. | 20 |
| **Total Points** | **100** |
Student E-Defense Examples
**Program Outcome 8** Demonstrate collaborative practice and interpret nursing science within an interdisciplinary context.

*MSN Essentials*

- **Essential VII** Interprofessional Collaboration for Improving Patient and Population Health
- **Essential VIII** Clinical Prevention and Population Health for Improving Health
- **Essential IX** Master’s-Level Nursing Practice

*NLN Nurse Educator Competencies 1,2*

- Bridge Clinical experience: Counselor, Medical Physician, Psychiatric Physician, NPs, RNs, and Case Management.
- Teaching Plans @ Bridge Clinical
- Post Conference after clinical day
Program Outcome 7 **Systematically apply** evidence from research findings to answer clinical questions, solve clinical problems, and develop innovative nursing interventions and health policies for selected patient populations.

**MSN Essential IV Translating and Integrating Scholarship into Practice**  
**Essential IX Master’s-Level Nursing Practice**  
**NLN Nurse Educator Competencies 3,4**

- Implementation of Dr. Linda Caputi’s clinical vital signs activity (MPO #7, NLN #3, NLN #4, E IV, E IX)

“This week was exciting because we were implementing the vital signs activity that Dr. Caputi included in her presentation. Overall, I think the students enjoyed the activity. There was one student that commented about their patient having sixteen medications and how time consuming it was to look at all of the effects of those medications. However, I thought that was a great way to show the significance of the activity and how when they enter practice they will more than likely have several patients that they will need be able to quickly scan their medications and know which ones may be altering their patients vital signs.

In addition, I really think that the activity made the students delve deeper into other things such as their patient’s medical history, labs, and diagnostics. For instance, one student was comparing her patient’s vital signs to a previous visit a few months before. They noted that the patients heartrate was in the 100’s months prior and this visit the patient’s heartrate has consistently been in the 40’s and 50’s. First, the student struggled to identify which particular medicine could affect the patient’s heartrate however; she did have it narrowed down to two. Upon further discussion of the medications with the student, they chose the correct one.

We also went on to discuss what else was going on with this patient and their past medical history. For instance, this patient had a history of paroxysmal atrial fibrillation. Knowing this information and based on the patient’s trend this visit, we looked for an EKG, which yielded sinus bradycardia. From there it led us to see if any consults ordered based on this information and in this case, yes there was a cardiac consult. That is just one example of one student that I was able to work with on this activity and look at all the information the student was able to obtain! It was a great learning moment for the student and I honestly do not think they would have gathered this information if it were not for the direction of this activity”!
Audience Participation

• The evidence demonstrates the Program Outcome is achieved?
• Use cue cards
Program Outcome 8  Demonstrate collaborative practice and interpret nursing science within an interdisciplinary context.

*MSN Essentials*

- Essential VII  Interprofessional Collaboration for Improving Patient and Population Health
- Essential VIII  Clinical Prevention and Population Health for Improving Health
- Essential IX  Master’s-Level Nursing Practice

*NLN Nurse Educator Competencies 1,2*

- Bridge Clinical experience: Counselor, Medical Physician, Psychiatric Physician, NPs, RNs, and Case Management.
- Teaching Plans @ Bridge Clinical
- Post Conference after clinical day
Poll #1

• Student-1 demonstrates he/she met the program learning outcome.
  Yes
  No
Poll #2

- Student-1 demonstrates he/she understands the program learning outcome.
  
  Yes
  
  No
Program Outcome 7 **Systematically apply** evidence from research findings to answer clinical questions, solve clinical problems, and develop innovative nursing interventions and health policies for selected patient populations.

**MSN Essential IV Translating and Integrating Scholarship into Practice**

**Essential IX Master’s-Level Nursing Practice**

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Poll #3

- Student-2 demonstrates he/she met the program learning outcome.
  
  Yes
  
  No
Poll #4

• Student-2 demonstrates he/she understands the program learning outcome.
  Yes
  No
Future implications and impact

What is next?
Questions
References


Part 2
Scholarly project dissemination to enhance evidence-based practice attitudes for future advanced practice nurses.

Tonya Breymier PhD, RN, CNE, COI
Part 2 Objectives

• The learner will discuss innovative and creative platforms to evaluate EBP attitudes through scholarly project dissemination.

• The learner will evaluate a specific electronic poster presentation rubric.

• The learner will discuss best practices for peer review and future implications toward EBP.
Asking “So-what ?” for a culminating scholarly project

- PICOT question (population, intervention/issue, comparison, outcome, time frame).
- Search for best evidence.
- Analyze and synthesize evidence.
  Research course, 4th semester.
- Integrate the best evidence for a practice decision or change.
- Evaluate the outcomes.
- Disseminate the outcomes.
  Evaluation and Dissemination alterations.

(Wilson et al., 2016)
Development of EBP Attitudes

- MSN program, three tracks: Education, Administration and FNP.
- Create a culture of inquiry = Acquire EBP knowledge, skills and attitudes = Increases confidence to embrace and engage in EBP projects.
- Dissemination is a key component as well.
The MSN Scholarly Project

• Need for enhanced EBP knowledge, skills and attitudes.

• Project does not necessarily have to be research.

• Poster over podium presentation, best practices for poster presentations.

     Do’s and Don’ts for posters.
Poster Dissemination Rubric (see handout)

- Revised a previous poster rubric.
- Included MSN program learning outcomes section.
- Importance of peer review and reporting peer and faculty comments to students.
Pigs in Space: Effect of Zero Gravity and Ad Libitum Feeding on Weight Gain in Cavia Porcellus

Colin B. Purrington

6673 College Avenue, Swarthmore, PA 19081 USA

ABSTRACT:
One ignored benefit of space travel is the potential elimination of obesity, a chronic problem for a growing majority in many parts of the world. In theory, when an individual is in a condition of zero gravity, weight is eliminated. “Indeed, in space one could consider itself as an animal that is fed and allowed to walk but never given access to food, and the only side effect would be the need to upgrade one’s stretchy pants!”

But because current schemes still do very good theories only to be found to be rather harmful, we tested our predictions with a 3-month experiment in a colony of Guinea pigs (Cavia porcellus) maintained in the International Space Station. Individuals were housed separately and given unlimited amounts of high-calorie foods. Fresh fruits and vegetables were not available in space so they were not offered. Every 30 days, each Guinea pig was weighed. At 2 months, we found that individuals on average continued to lose weight. In addition to weighing nothing, no weight appeared to be gained over the duration of the protocol. Space continues to be gravity-free, and we realized that assumption is sound, we believe that weight loss was due to the absence of gravity.

RESULTS:
The current obesity epidemic started in the early 1980s. In 1984, the invention of the refrigerator and the popularization of fast food and soda led to a significant increase in obesity rates. The obesity epidemic has been linked to the sedentary lifestyle of modern societies. However, the obesity epidemic has also been linked to the consumption of high-calorie foods, such as fast food and sugary drinks.

CONCLUSIONS:
Our view that weight and weight gain would be zero in space was confirmed. Although we have not replicated this experiment on larger animals or primates, we are confident that our result would be mirrored in other model organisms. We are currently in the process of obtaining necessary human and animal permissions, and should have our planned experiments initiated within 60 days, pending expedited review by local and Federal IRBs.

LITERATURE CITED:
NASA. 1982. Project STS-XX: Guinea Pigs. NASA Technical Report. Space-Exes, the consortium of wees divorced from insatiably wealthy space-lift startups. I am also grateful for comments on early drafts by Marlene Athletic Club, Corpus Christi, USA. Finally, sincere thanks to the Guy Foundation for generously donating animal care after the conclusion of the study.
Development of a Pre-Diabetes Knowledge Assessment Tool: The PDUE (Orem Guided) Journey

Introduction

• **Diabetes:** Affects all body systems
• Increasing at an alarming rate
• 2015 - 30.3 million Americans, or 9.4% of the population, had diabetes.
• 1.5 million Americans are diagnosed with diabetes every year (many undiagnosed)
• 7th Leading Cause of Death in United States
• Cost strain on healthcare $245 Billion
• **Prediabetes:** In 2015, An estimated 33.9% of U.S. adults aged 18 years or older - 84.1 million Americans had prediabetes.
• Pre-diabetes is precursor
  • 9 out of 10 people do not realize they have

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**US Population**

9.4% Diabetes

33% Prediabetes

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Literature Review

• Effective interventions to slow the progression centered on
  **Lifestyle changes**
  • Increase exercise
  • Weight loss
  • Eating the appropriate foods and amounts at the correct time intervals
• **Barriers to Patient Self-management**
  • Confusion
  • Socioeconomic status (SES)
  • Health Literacy
  • Poor Communication with their provider
• Providers don’t understand what patients don’t understand
  • Provider Fatigue
• Knowledge Deficit is a **Common Theme** throughout the literature
• The data synthesized suggests the need to customize diabetes care based on age, comorbidity, functional health status, and attitudes towards diabetes
• A gap in the literature --- How do providers bridge that knowledge gap to help patients be successful?

Project

• Teaching Patients **Pre-Diabetes Understanding Exam (PDUE)**
  • (Mini-Mental Status Concept)
  • PDUE - 8 question test
  • Exercise, weight reduction, blood sugar control, meal planning, & meal timing
• Identifies knowledge barriers
• Guides the education efforts
• Closes the disconnect
• Aids patient satisfaction

**Family Nurse Practitioners**

• Evaluation (providers & nutrition educators)
• Potential next steps- Usability study
• Develop more screening & testing

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**Contribution to Science**

**High priority to prevent or delay diabetes**

• Customized support to the patient
• Education and provider influence for converting prediabetes to normal glucose state
• Self-efficacy for lifestyle intervention
• Reverse or delay progression as well as complications

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**Dorothea Orem’s**

• Self-care Deficit
• Self-care Agency
• Knowledge

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**Self Care**

**Education**

**Compliance**
Peer Review

- Utilize the MSN Poster Dissemination Rubric.
- “So-What?”
- Peer Review Best Practices:
  
  Skill to be practiced and learned.

  Rubric provides students with a tool to identify key issues (or lack of) and avenue to provide feedback.

  Most effective when students have the opportunity to apply the feedback.

The University of Iowa- Office of Teaching, Learning and Technology. https://teach.its.uiowa.edu/developing-critical-thinking-through-peer-review/peer-review-best-practices
Peer review in your teaching

• Discuss with your neighbor how you currently use peer review.

• Identify one example that you feel will assist with development of knowledge, skills and attitudes for future EBP application.
How do we nurture a Culture of Inquiry?

• Develop inquiring minds
• Begins in semester 1
• Begin literature review (PICOT) in semester 4
• Assigned their Scholarly Project Mentor between semester 4 and 5.
• Scholarly Project semester is semester 6, includes dissemination.
References


Part 3
Utilizing overall program evaluation data: Innovative steps to enhance evidence-based practice attitudes through curriculum improvement.

Gloria Dixon, DNP, RN
Part 3 Objectives

• The learner will discuss the global impact of EBP on healthcare.
• The learner will discuss evaluation strategies that capture MSN program learning outcomes.
• The learner will identify program learning outcome data and the influence on future curriculum.
Evaluate trends with EBP attitudes and future practices for impact.

• “44% of nurses were confident in their ability to implement evidence-based practice but more than 60% have not utilized EBP to change clinical practice” (Warren, 2016).
Innovative evaluation strategies to capture MSN program learning outcome data.

Outcome rubric embedded within the learning management system (LMS)

• Outcome rubric:

  3- Met- The student performance clearly demonstrates evidence of meeting the program learning outcome.

  2- Developing- The student performance partially demonstrates meeting the program learning outcome by showing some attainment of knowledge and skills, but lacks sufficient evidence.

  1- Not met- The student performance fails to demonstrate evidence of meeting the program learning outcome.

  0- NA- The student failed to submit the assignment; assignment is not relevant.
LO# 5: Frame problems, design interventions, specify outcomes, and measure achievement of outcomes while balancing human, fiscal, and material resources to achieve quality health outcomes: (EC: 1, 3, 4, 6) [IUEPGE: 2]

19%

61%

Mastery set at: 3

Calculation Method... 65/35 Decaying Average

Example: Most recent result counts as 65% of mastery weight, average of all other results count as 35% of weight. If there is only one result, the single score will be returned.

1 - Item scores: 1, 4, 2, 3, 5, 3, 6
2 - Final score: 4.95

LO#7 - Systematically apply evidence from research findings to answer clinical questions, solve clinical problems, and develop innovative nursing interventions and health policies for selected patient populations: [IUEPGE: 2, 3, 5].

100%

Mastery set at: 3

Calculation Method... 65/35 Decaying Average

Example: Most recent result counts as 65% of mastery weight, average of all other results count as 35% of weight. If there is only one result, the single score will be returned.

1 - Item scores: 1, 4, 2, 3, 5, 3, 6
2 - Final score: 4.95
Data analysis toward overall program learning outcome attainment and application toward future curriculum revisions.

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Education NLN Nurse Educator Competencies:

time for questions
References


Conclusion

• Impact of EBI related to program learning outcomes.
  
  e-Defense
  Scholarly Project Dissemination
  Overall Program Evaluation

• Impact of EBI knowledge, skills and attitudes post-graduation.
Conclusion

Challenges
Increase Engagement
Global Impact and Future of EBP

Healthy People 2020
Link evidence to real world
Create cultures to enhance and sustain EBP

Healthy People 2020, 2018; Melnyk et al., 2012
Questions?
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